

Amendments to the Claims:

Claims 1-32 were pending at the time of the Office Action.

Claims 1-9, 18, and 28-32 are hereby amended.

Claims 10-13 and 21-24 are hereby canceled.

Claims 1-9, 14-20, and 25-32 remain pending.

1. (Currently Amended) A connector module communications system, comprising:
a connector module including:

a first member having at least one first conductive lead disposed therein and a dielectric portion coupled to an end portion of the at least one first conductive lead; and

a second member having at least one second conductive lead disposed therein, the first and second members being coupled such that respective end portions of the first and second conductive leads are operatively positioned and spaced apart by the dielectric portion, the dielectric portion being adapted to capacitively couple the respective end portions of the first and second conductive leads and to allow signals to be transmitted therethrough; and

a transmitter module including a transmitter, wherein the transmitter module is disposed between a common ground and the connector module;

a receiver module including a receiver, wherein the receiver module is disposed between the common ground and the connector module,

wherein the transmitter module, the receiver module, and the common ground are configured to allow ground return between the transmitter and the receiver, and wherein at least one of the transmitter module and receiver module is electrically coupled to one of the at least one first conductive lead and the at least one second conductive lead.

2. (Currently Amended) The system connector module of Claim 1, wherein the dielectric portion comprises a first dielectric portion, further comprising a second dielectric portion coupled to the end portion of the at least one second conductive lead.

3. (Currently Amended) The system connector module of Claim 1, wherein the at least one first conductive lead includes a pair of first conductive leads having a corresponding pair of dielectric portions coupled to end portions thereof, and wherein the at least one second conductive lead includes a pair of second conductive leads.

4. (Currently Amended) The system connector module of Claim 1, wherein the transmitter module includes a gain coupled to the transmitter, and a low-pass filter coupled between the gain and the connector module the first and second conductive leads comprise size 12 leads.

5. (Currently Amended) The system connector module of Claim 1, wherein the thickness of the dielectric portion is approximately 1 mm.

6. (Currently Amended) The system connector module of Claim 1, wherein the dielectric portion has a dielectric constant within the range of approximately one to approximately ten.

7. (Currently Amended) The system connector module of Claim 1, wherein the receiver module includes a low-pass filter coupled to the transmitter, and a gain coupled between the low-pass filter and the connector module the first and second conductive leads comprise size 12 leads, and wherein the thickness of the dielectric portion is approximately 1 mm, and wherein the dielectric portion has a dielectric constant of approximately three.

8. (Currently Amended) The system connector module of Claim 1, wherein the at least one first conductive lead includes a pair of first conductive leads having a corresponding first pair of dielectric portions coupled to end portions thereof, and wherein the at least one second conductive lead includes a pair of second conductive leads having a corresponding second pair of dielectric portions coupled to end portions thereof, wherein the first and second pairs of conductive leads comprise size 12 leads, and wherein the thickness of the first and second dielectric portions is approximately 0.5 mm, and wherein the first and second dielectric portions have a dielectric constant of approximately three.

9. (Currently Amended) An electronic system, comprising:

a signal lead;

a communications module including at least one of a transmitter module configured to adapt to at least one of transmit a data signal and a receiver module adapted to receive a data signal; wherein the transmitter module comprises a transmitter coupled to a first gain, and a first low-pass filter coupled between the first gain and the signal lead, and wherein the receiver module comprises a receiver coupled to a second low-pass filter, and a second gain coupled between the second low-pass filter and the signal lead; and

a signal lead; and

a capacitive coupling module coupled between the data-communications module and the signal lead, the capacitive coupling module including

a first member having at least one first conductive lead disposed therein and a dielectric portion coupled to an end portion of the at least one first conductive lead; and

a second member having at least one second conductive lead disposed therein, the first and second members being coupled such that respective end portions of the first and second conductive leads are operatively positioned and spaced apart by the dielectric portion, the dielectric portion being configured adapted to capacitively couple the respective end portions of the first and second conductive leads and to allow signals to be at least one of transmitted and received therethrough.

10. (Canceled)

11. (Canceled)

12. (Canceled)

13. (Canceled)

14. (Original) The electronic system of Claim 9, wherein the dielectric portion comprises a first dielectric portion, further comprising a second dielectric portion coupled to the end portion of the at least one second conductive lead.

15. (Original) The electronic system of Claim 9, wherein the at least one first conductive lead includes a pair of first conductive leads having a corresponding pair of dielectric portions coupled to end portions thereof, and wherein the at least one second conductive lead includes a pair of second conductive leads.

16. (Original) The electronic system of Claim 9, wherein the first and second conductive leads comprise size 12 leads, and wherein the thickness of the dielectric portion is approximately 1 mm, and wherein the dielectric portion has a dielectric constant of approximately three.

17. (Original) The electronic system of Claim 9, wherein the at least one first conductive lead includes a pair of first conductive leads having a corresponding first pair of dielectric portions coupled to end portions thereof, and wherein the at least one second conductive lead includes a pair of second conductive leads having a corresponding second pair of dielectric portions coupled to end portions thereof, wherein the first and second pairs of conductive leads comprise size 12 leads, and wherein the thickness of the first and second dielectric portions is

approximately 0.5 mm, and wherein the first and second dielectric portions have a dielectric constant of approximately three.

18. (Currently Amended) An aerospace vehicle, comprising:

a fuselage;

a propulsion system operatively coupled to the fuselage; and

an electronic system disposed within the fuselage and including

a signal lead;

a communications module including at least one of a transmitter module configured to adapt to at least one of transmit a data signal and a receiver module adapted to receive a data signal; wherein the transmitter module comprises a transmitter coupled to a first gain, and a first low-pass filter coupled between the first gain and the signal lead, and wherein the receiver module comprises a receiver coupled to a second low-pass filter, and a second gain coupled between the second low-pass filter and the signal lead; and

a signal lead; and

a capacitive coupling module coupled between the data communications module and the signal lead, the capacitive coupling module including

a first member having at least one first conductive lead disposed therein and a dielectric portion coupled to an end portion of the at least one first conductive lead; and

a second member having at least one second conductive lead disposed therein, the first and second members being coupled such that respective end portions of the first and second conductive leads are operatively positioned and spaced apart by the dielectric portion, the dielectric portion being adapted to capacitively couple the respective end portions of the first and second conductive leads and to allow signals to be at least one of transmitted and received therethrough.

19. (Original) The aerospace vehicle of Claim 18, wherein the electronic system is operatively coupled to the propulsion system.

20. (Original) The aerospace vehicle of Claim 18, further comprising a flight control system disposed within the fuselage, and wherein the electronic system is operatively coupled to the flight control system.

21. (Canceled)

22. (Canceled)

23. (Canceled)

24. (Canceled)

25. (Original) The aerospace vehicle of Claim 18, wherein the dielectric portion comprises a first dielectric portion, further comprising a second dielectric portion coupled to the end portion of the at least one second conductive lead.

26. (Original) The aerospace vehicle of Claim 18, wherein the at least one first conductive lead includes a pair of first conductive leads having a corresponding pair of dielectric portions coupled to end portions thereof, and wherein the at least one second conductive lead includes a pair of second conductive leads.

27. (Original) The aerospace vehicle of Claim 18, wherein the first and second conductive leads comprise size 12 leads, and wherein the thickness of the dielectric portion is approximately 1 mm, and wherein the dielectric portion has a dielectric constant of approximately three.

28. (Currently Amended) A method of transmitting signals, comprising:
providing a signal lead;
providing a communications module including adapted to providing at least one of a transmitter module adapted to transmit a data signal and a receiver module adapted to receive a data signal; wherein providing the transmitter module include providing a transmitter coupled to a first gain, and providing a first low-pass filter coupled between the first gain and the signal lead, and wherein providing the receiver module comprises providing a receiver coupled to a second low-pass filter, and providing a second gain coupled between the second low-pass filter and the signal lead;
providing a signal lead;
providing a capacitive coupling module coupled between the data communications module and the signal lead; and
capacitively transmitting the data signal between the communications module and the signal lead.

29. (Currently Amended) The method of Claim 28, wherein providing a communications module comprises a transmitter module capacitive coupling module includes:
providing a first member having at least one first conductive lead and a dielectric portion coupled to an end portion of the at least one first conductive lead; and
providing a second member having at least one second conductive lead, the first and second members being coupled such that respective end portions of the first and second conductive leads are operatively positioned and spaced apart by the dielectric portion, the dielectric portion being configured to capacitively couple the respective end portions of the first and second conductive leads and to allow signals to be at least one of transmitted and received therethrough.

30. (Currently Amended) The method of Claim 289, wherein the dielectric portion comprises a first dielectric portion, further comprising a second dielectric portion coupled to the end portion of the at least one second conductive lead providing a communications module comprises a receiver module.

31. (Currently Amended) The method of Claim 289, wherein the at least one first conductive lead includes a pair of first conductive leads having a corresponding pair of dielectric portions coupled to end portions thereof, and wherein the at least one second conductive lead includes a pair of second conductive leads further comprising filtering the data signal through a low-pass filter.

32. (Currently Amended) The method of Claim 289, wherein the first and second conductive leads comprise size 12 leads, and wherein the thickness of the dielectric portion is approximately 1 mm, and wherein the dielectric portion has a dielectric constant of approximately three providing a capacitive coupling module comprises providing a capacitive coupling module including

providing a first member having at least one first conductive lead disposed therein and a dielectric portion coupled to an end portion of the at least one first conductive lead; and

providing a second member having at least one second conductive lead disposed therein, the first and second members being coupled such that respective end portions of the first and second conductive leads are operatively positioned and spaced apart by the dielectric portion, the dielectric portion being adapted to capacitively couple the respective end portions of the first and second conductive leads and to allow signals to be at least one of transmitted and received therethrough.